

Farm Equipment Business Recovers Rapidly

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SALES and production of farm equipment manufactures have recovered rapidly in the past 3 years after dropping to an extremely low level in 1932. In that year, the estimated value of production was less than one-fifth of the 1929 figure. The improvement has resulted mainly from the rise in the income of the farm population, and particularly in that portion of the farm income which is available after meeting current expenses of production.

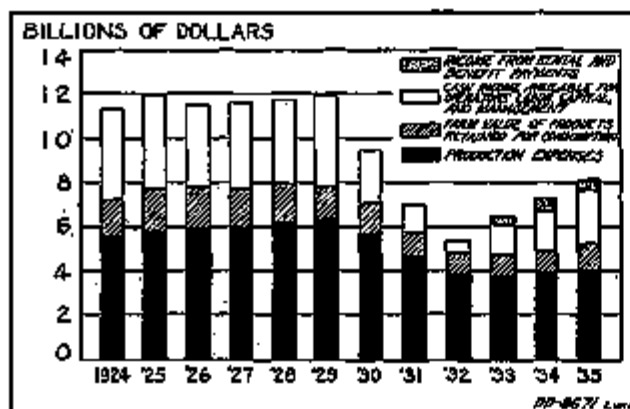


Figure 1.—Distribution of Gross Income From Farm Production, 1924-35 (United States Department of Agriculture).

Figure 1 shows the trend of gross income from farm production during the past 12 years, and the proportion of the total required for production expenses, as well as that portion representing the value of products retained for consumption on the farms. It will be noted that the amount available after meeting production expenses, and exclusive of the consumption requirements on the farms, dropped sharply after 1929 to reach a relatively small total in 1932. This decline was accompanied by a rapid drop in the sales of farm equipment. With the recovery in farm prices and farm income, and the added rental and benefit payments by the A. A. A., sales in the past 2 years have undergone a marked revival.

Farm equipment business in 1935 was the best since 1930, although it fell considerably short of the results of the earlier year. Production amounted to \$331,998,066, and sales in the United States were valued at \$300,263,076, according to preliminary official statistics of the United States Bureau of the Census. Production during 1935, however, was only 65 percent of the 1930 figure of \$507,002,259, and only 55 percent of the 1929 figure of \$606,621,812. Official statistics for 1931 show production of \$214,390,792, while estimates for the intervening years, 1932 to 1934, inclusive, place production below the \$200,000,000 mark in each

year. For the low year, 1932, the value of production was not much more than half of this figure.

With the further rise in farm income so far during 1936, the upward trend of sales and production has persisted. Although neither production nor sales data are available on a monthly basis, the figures on employment and pay rolls afford some indication of the trend. For the first 4 months of the year the employment index stood at 137 (1923-25=100) while the pay-roll index was at 168, these figures representing, respectively, increases of 44 percent and 59 percent over the corresponding period of 1935. The April figures for both employment and pay rolls were the highest reported since 1929.

Four Main Categories of Farm Equipment.

Generally speaking, farm equipment may be divided into four broad classifications. The first is tillage equipment, which includes plows, harrows, cultivators, planting and seeding machinery, and in general those machines which are used to prepare the soil, to plant and to care for the growing crop up to the time of harvest.

The second group, harvesting machinery, is made up of grain binders, corn binders, reapers, combined harvester-threshers, threshing machines, hayrakes, mowers, and, in general, all equipment used in harvesting the crop and preparing it for market.

The third and most important class, from the standpoint of value of product, is the tractor group, which comprises all types of tractors and parts. The fourth class, miscellaneous farm equipment, includes a wide variety of machines and appliances not used directly in the production of crops but important on every farm, such as barn equipment, dairy equipment, windmills, and poultry equipment.

Figure 2 depicts the trend of production of these four general classes from 1920 to 1935, omitting a break-down for the years 1932, 1933, and 1934, for which comparable figures are not available. The chart reveals the growing importance of the tractor in relation to total production, a development which has been associated with the trend toward power farming. In the 5-year period ended 1924 the value of tractors represented 29 percent of the total value of farm equipment produced; in the succeeding 5-year period the percentage was 35. Complete data are not available for the years subsequent to 1929 but in 1930 the percentage was 41; in 1931 it was 34 and in 1935 it was 43.

The number of tractors on farms has increased each year during the depression, notwithstanding the

adverse influences tending to restrict sales and the drop in production. According to the census of 1930, the number of tractors on farms was 920,021, and by July 1935 the number had increased to 1,174,839. At present the number is in excess of 1,200,000.¹

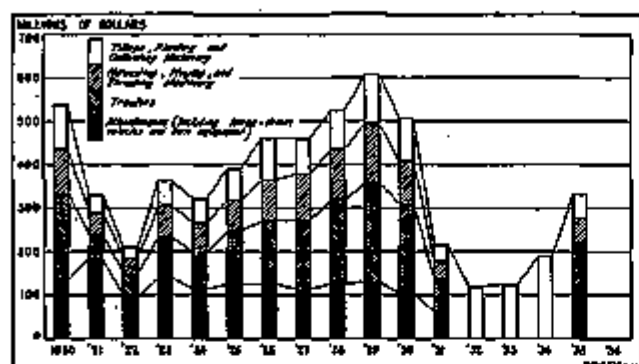


Figure 2.—Value of Production of Farm Equipment and Related Products (Bureau of the Census, U. S. Department of Commerce).

NOTE.—The census of production of farm equipment and related products was not taken for the years 1931 to 1935 inclusive. The totals for these years are unofficial estimates.

Development of "All-Purpose Tractor."

The original tractor, which came into fairly general use during and immediately following the war, was somewhat limited in its application to agriculture. It was ideally suited to plowing, harvesting, and tasks requiring belt power, but it could not be used to cultivate row crops such as corn, cotton, and similar products.

About 1925, the "all-purpose tractor" of lower horsepower was developed. This type overcame many of the objections to its predecessors and it has constituted a very large proportion of the total produced in recent years. In 1931, 61,940 wheeled tractors were produced of which 25,831, or 41.7 percent, were of the "all-purpose" type. In 1935, 138,084 wheel tractors were manufactured of which 106,343, or 77 percent, were of this type. Part of the gain made in 1935 was due to the development of the so-called "baby all-purpose tractor", a machine of small horsepower for use on small holdings.

The track-laying tractor has also made important strides during the past few years, and has made a marked contribution to the industry's recovery. This particular machine has certain limitations for farm use, being employed mainly on extensive holdings, but it is a most practical machine for many industrial uses such as logging, road building, grading, and other tasks in the construction industry.

An important development in the track-laying tractor industry in recent years was the utilization of the Diesel engine for power purposes. The first Diesel-powered tractor was produced in 1931 and subsequently the Diesel type has grown in popularity due to its low operating costs. It is now being marketed by all track-laying tractor producers.

Improvement in Other Types of Equipment.

Coincident with the development of the tractor and its widespread application to farming tasks has been the improvement and refinements in many other types of equipment. The "baby combine", for example, has recently been developed for the small farm with diversified crops. Heretofore the combine was suitable only for use on large farms and was beyond the reach of the small diversified farm except on a cooperative basis. Many other developments have been of interest, but lack of space prevents a more extensive treatment here.

Comparative Production and Sales Data.

The accompanying table gives comparative figures on production and sales of the principal classes of farm equipment and related products for the years 1930, 1931, and 1935. It should be noted that the 1935 figures are preliminary and subject to correction, but it is not believed that the final figures will alter materially the data as here presented.

Table 1.—Value of Farm Equipment and Related Products Manufactured and Sold, by Classes: 1935, 1931, and 1930

(The sales statistics refer only to sales by manufacturers and do not cover sales by dealers to consumers. The principal difference between the export sales as reported by manufacturers and the value of exports as reported by the Bureau of Foreign and Domestic Commerce is the fact that many manufacturers report to the Bureau of the Census on a fiscal-year basis, whereas the reports of the Bureau of Foreign and Domestic Commerce are compiled on a calendar-year basis. The figures for export sales understate somewhat and those for domestic sales correspondingly overstate the amounts of the actual sales, because of the fact that some manufacturers sell to middlemen who export a part but not all of the commodities they purchase, so that manufacturers do not in all cases know whether their products are destined for export. The value figures include values of attachments and parts.)

Class	Year	Manufactured	Sold by manufacturers—		
			Total	For use in United States	For export
Total.....	1935	\$331,038,000	\$334,415,069	\$300,268,070	\$34,147,019
	1931	214,390,792	215,079,823	(1)	(1)
	1930	602,002,229	493,448,224	382,190,710	89,257,518
Planting, seeding, and fertilizing machinery.	1935	14,081,878	15,284,685	14,626,472	658,123
	1931	10,862,052	10,828,061	(1)	(1)
	1930	28,067,101	22,943,738	21,099,871	2,385,926
Plows and listers.	1935	19,344,431	18,499,832	18,330,012	1,668,022
	1931	12,064,033	14,773,483	(1)	(1)
	1930	37,838,174	37,176,586	28,463,060	8,653,821
Harrow, rollers, pulverizers, and stalk cutters.	1935	9,438,402	9,337,002	8,210,818	337,184
	1931	5,937,798	5,303,103	(1)	(1)
	1930	13,814,790	12,042,491	11,507,504	1,003,967
Cultivators and weedeaters.	1935	11,802,321	11,754,535	11,328,768	427,768
	1931	8,496,204	10,750,350	(1)	(1)
	1930	21,692,100	19,600,358	18,720,208	1,167,141
Harvesting machinery....	1935	23,642,983	27,780,285	25,353,849	2,206,436
	1931	19,665,370	26,288,730	(1)	(1)
	1930	62,145,815	60,802,630	42,194,211	13,772,825
Haying machinery.....	1935	14,762,186	15,160,071	14,797,245	462,430
	1931	7,084,682	7,737,719	(1)	(1)
	1930	17,184,426	15,037,000	14,048,374	1,477,270
Machines for preparing crops for market or use.	1935	15,446,993	15,306,046	15,034,938	780,109
	1931	12,048,286	13,750,850	(1)	(1)
	1930	20,700,106	22,028,830	16,862,307	3,169,803
Tractors.....	1935	147,822,532	137,090,418	123,432,943	14,857,875
	1931	73,672,447	98,120,434	(1)	(1)
	1930	206,057,133	190,036,710	132,034,548	57,493,167
Engines.....	1935	10,273,380	9,012,832	8,078,685	533,048
	1931	3,022,807	2,194,742	(1)	(1)
	1930	6,144,196	6,822,001	4,733,817	1,748,444
Farm wagons and trucks.	1935	5,888,111	5,900,242	6,777,726	25,514
	1931	1,884,003	1,810,700	(1)	(1)
	1930	4,002,690	4,504,790	4,614,612	80,249
Miscellaneous farm machines and equipment.	1935	58,914,124	58,480,038	50,200,862	2,284,776
	1931	57,410,940	57,305,252	(1)	(1)
	1930	96,772,221	91,072,072	86,160,061	4,908,891

¹ Not called for separately on schedule.

² Statistics for 1935 include data for engines up to 100 horsepower, whereas those for 1931 and 1930 include data only for engines up to 20 horsepower.

Source: Bureau of the Census, U. S. Department of Commerce.

¹ Estimates for years subsequent to the census are from the Research Department, Farm Equipment Institute.

Aside from the marked increase in the value of tractor production, the largest relative increases from 1931 to 1935 were in haying machinery, plows and listers, and farm wagons and trucks. The increase in harvesting machinery, between the two periods, was relatively smaller than that for other major types of equipment.

Improvement in Export Trade Lagging.

Exports of farm equipment and related products fell precipitously from 1929 to 1932 and, while there has been some recovery during the past 3 years, it has

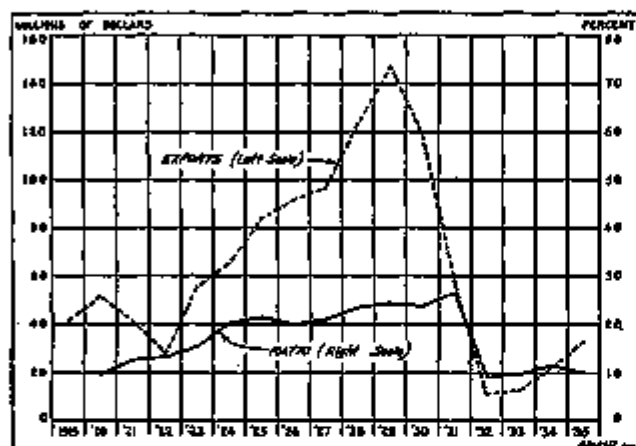


Figure 3.—Exports of Farm Equipment and Related Products and the Percentage of the Production of these Products Exported (Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce)

Note.—A census of production of farm equipment and related products was not taken for the years 1932 to 1934; the totals used for computing the percentage of the products exported for these years are unofficial estimates. See Figure 2 for production data.

not been so marked as the gains in domestic sales. During the period 1924 to 1931, inclusive, the proportion of the total domestic production exported exceeded 20 percent. In 1931, when the ratio was highest, the percentage was 27. Although official production figures are not available for 1932, 1933, and 1934, only about 10 percent of the estimated production was exported, or approximately the same as the figure revealed by the official data for 1935. Figure 3 shows the value of exports for the period 1919 to 1935, inclusive, together with the ratio of exports to production for all these years, except 1919.

The rapidly expanding trade during the 1920's was largely the result of the demand in certain foreign countries for power-farming equipment. In Canada, Argentina, South Africa, and Australia, a large market for tractors, combines, and other power-farming implements was developed. An additional factor in this expanding trade was the inability of certain major farm equipment producing countries to compete on favorable terms with United States manufacturers in agricultural areas while the domestic manufacturing industries in these countries were being rehabilitated. During recent years of more restricted markets, manufacturers in these countries have offered more aggressive competition to American sales organizations. Furthermore, sales were restricted by the many foreign trade barriers, such as high tariffs, exchange controls, import restrictions, and other artificial impediments to the flow of trade.

Were it not for unusually large purchases by the Union of Soviet Socialist Republics in 1930 and 1931, the foreign trade statistics would make a much less favorable showing during the early years of the depression. In these 2 years, exports to the Union of Soviet Socialist Republics amounted to \$79,790,000, or 46 percent of the total exports. Sales to this area have been reduced to relatively small proportions since 1931, owing to the rapid development of the Soviet farm equipment manufacturing industry.

The reciprocal trade agreement program may alleviate some of the adverse influences operating to restrict trade. The agreement with Canada, effective January 1, 1936, removed all tariff duties on tractors and lowered the duty on other farm machinery. This market has always been the leading foreign purchaser of American farm equipment. The agricultural situation and general business outlook in Australia and South Africa have improved during the past year with a resultant gain in exports to those countries. Better agricultural conditions in Argentina have stimulated sales to some extent in that major market.

Exports for the first quarter of 1936 were valued at \$8,913,374, an increase of 36 percent over those of the corresponding quarter of 1935. While the largest total for this period since 1931, it was much smaller than in the earlier period.